

MSHA Metal and Nonmetal North Central District

Steven Richetta, District Manager Gerald Holeman, Assistant District Manager

District Office: 515 W. First St.

> Duluth, MN 55802-1302 telephone 218-720-5448 fax 218-720-5650

Welcome to the MSHA Metal and Nonmetal North Central District Mine Safety and Health Newsletter. This internet-accessible quarterly safety and health newsletter for miners and mine operators provides up-to-date information on MSHA regulations and mine safety and health information relating to metal and nonmetal mining in MSHA's North Central District, comprising Illinois, Iowa, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

Topics covered in this issue include the following:

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FATAL ACCIDENT UPDATE

During the first quarter of 2006 through March 31, three fatal accidents occurred at M/NM mines. During the second quarter of 2006, the industry experienced a significant increase in fatal accidents, with thirteen fatalities recorded between April 1 and June 30.

Electrocution

On April 3, 2006, a 50-year old electrician, with eleven years mining experience, was fatally injured at a crushed stone mine. A rubber-tired boom truck was being used to set a metal pump control house. The victim was standing on the ground touching the suspended pump house when the boom contacted an energized overhead power wire, electrocuting him.

Conveyor Tail Pulley

On April 4, 2006, a 23-year-old laborer, with one month mining experience, was fatally injured at a sand and gravel operation. The victim had entered the area under the crusher and traveled near the back side of the discharge conveyor tail pulley. His clothing became entangled in the rotating tail pulley.

Struck Skid-Steer Loader

On April 11, 2006, a 22-yearold rock handler, with 9 months mining experience, was fatally injured at a dimension stone operation. The victim stacked patio stones on a wood pallet and wrapped wire field fence around the stones to secure them in place. As he was tightening the fence material by twisting the wire, he was struck by a skid steer that was backing up.

Fall of Highwall

On April 21, 2006, a 35-year-old driller/breaker, with 11 months mining experience, was fatally injured at a dimension stone operation. The victim was setting pins and wedges to break out an uneven section of the quarry floor when a piece of limestone approximately 13 feet long, 9 feet high, and 9 inches thick fell from the highwall, pinning him. Another miner, who was also working in the pit, was injured.

Run Over by Front-End Loader

On April 22, 2006, a 53-yearold utility operator, with 33 years mining experience, was fatally injured on the surface of an underground limestone mine. The victim was walking near the railroad tracks when a front-end loader ran over him.

Entangled in Tail Pulley

On May 3, 2006, a 19-year-old laborer, with 4 weeks mining experience, was fatally injured at a sand and gravel operation. The victim was underneath a feeder conveyor belt and was adjusting it when he became entangled between the belt and the return idler.

Electrocution

On May 19, 2006, a 77-year-old contractor electrician, with 58 years experience, was fatally injured at a construction sand and gravel operation. The victim was checking an electrical motor, contacted an energized conductor, and was electrocuted.

Fall While Changing Screens

On May 22, 2006, a 42-year-old maintenance journeyman, with 15 years mining experience, was fatally injured at a crushed stone operation. The victim and two co-workers were changing screens at the plant. The screens were placed on a wooden platform and a forklift was used to raise them about 17 feet. The victim climbed over a handrail onto the raised

screens. After doing this, the screens flipped off the forks and he fell to the ground.

<u>Crushed While Working From</u> Loader Bucket

On May 23, 2006, a 44-year-old plant operator, with 11 years mining experience, was fatally injured at a crushed stone The operation. victim was installing a roller on a conveyor belt and was working from the bucket of a front-end loader, 15 feet above the ground. The loader moved forward. crushing him against the conveyor framework.

Dozer Enters Water-Filled Pit

On May 26, 2006, a 58-year-old contractor dozer operator, with 12 years experience, fatally injured at a phosphate operation. The victim operating a dozer to push top soil into a water filled pit that was being reclaimed. A portion of the bank and stockpile collapsed, causing the dozer and victim to slide into the water.

Loader Bucket Not Blocked

On June 12, 2006, a 39-yearold plant operator, with 14 months experience, was fatally injured at a crushed stone operation. The victim was starting to repair a hydraulic line on a front-end loader that was parked outside of the shop. While underneath the raised boom, he loosened a hydraulic connection, causing the boom arms to fall, and pinning him against the frame.

Electrocution

On June 21, 2006, a 75-yearold contractor electrician, with experience, 50 years fatally injured at a sand and gravel operation. The victim contacted energized conductors while installing an electrical circuit. The building subsequently caught fire and before the primary burned circuit could be de-energized.

Fall Through Hatch Cover

On June 28, 2006, a 49-yearold utility man, with 20 years experience, was fatally injured at an iron ore mine. The victim was washing the roof over a kiln when he fell through a hatch cover.

Thus far in 2006, eleven of the sixteen fatal accidents recorded at metal and nonmetal mines have involved activities other than production mining operations. These accidents occurred while the victims were engaged in set-up, maintenance, repair, and clean-up activities. These types of jobs, often characterized by their non-routine nature, have long been known to present significant safety hazards.

The safety risks associated with these jobs were discussed in the January 2006 issue of this newsletter. Best practices to follow during maintenance, repair, set-up, knock-down, clean-up. construction. and demolition jobs were listed, and the SLAM Risk process was recommended as a way to control or eliminate hazards when performing these jobs. Refer to that newsletter issue or the MSHA internet web site for more information on SLAM Risk.

Mining construction, maintenance and repair are also the subjects of an upcoming safety seminar at the MSHA National Mine Health and Safety Academy in Beaver, WV.

This free, 2-day seminar is scheduled for September 6-7, 2006, and is open to all mining construction and industry personnel and related support groups and mining regulatory agencies. Topics will include shaft/slope construction, crane safety, rigging, excavation and trenching, fall protection, welding and cutting, aerial lifts, demolition, electrical hazards, materials handling, fire prevention, structural safety, hand tools, and much more. registration information. see MSHA's internet web (upcoming events) or call Tom Bonifacio at 304-256-3357.

It is also instructive to examine the demographics of the victims of the fatal accidents that have occurred during the first six months of 2006, as well as the industry sectors involved. Victims ranged in age from 19 to 77 years, they had from 4 weeks to 58 years of mining experience, and they worked both for contractors and production mine operators. Fatal accidents occurred at metal, nonmetal. sand and crushed gravel, stone. and dimension stone mines, at both surface and underground

operations, and in all regions of the country from Washington State to Florida, from California to Pennsylvania, and from Michigan to Texas. Clearly, we ALL need to redouble our efforts toward recognizing and eliminating unsafe conditions and practices.

A summary of fatal MNM mining accidents by accident category is shown below. The leading categories for the first six months of 2006 are powered haulage (6), machinery (3), and electrical (3).

Fatal Accident Summary for M/NM Mines, 2002 through mid-2006

FATALITIES CHARGEABLE TO	2002 2003			2004			2005			2006			
THE MNM MINING INDUSTRY	UG	S	UG	S		UG	S		UG	S		UG	S
ELECTRICAL	0	0	0	1		0	0		1	1		0	3
EXP VESSELS UNDER PRESSURE	0	0	0	0		0	0		0	0		0	0
EXP & BREAKING AGENTS	0	0	0	0		0	0		0	0		0	0
FALL/SLIDE MATERIAL	1	1	0	2		0	2		0	2		0	2
FALL OF FACE/RIB/HIGHWALL	0	0	0	0		0	0		0	0		0	1
FALL OF ROOF OR BACK	0	0	0	0		0	0		0	0		0	0
FIRE	0	0	0	0		0	0		0	0		0	0
HANDLING MATERIAL	0	0	0	0		0	0		0	0		0	0
HAND TOOLS	0	0	0	1		0	0		0	0		0	0
NONPOWERED HAULAGE	0	0	0	0		0	0		0	0		0	0
POWERED HAULAGE	0	7	0	1		0	2		3	3		1	5
HOISTING	0	1	0	0		0	0		0	0		0	0
IGNITION/EXPLOSION OF GAS/DUST	0	0	0	1		0	0		0	0		0	0
INUNDATION	0	0	0	0		0	0		0	0		0	0
MACHINERY	0	8	1	3		1	3		2	5		0	3
SLIP/FALL OF PERSON	0	1	1	1		0	5		0	0		0	2
STEP/KNEEL ON OBJECT	0	0	0	0		0	0		0	0		0	0
STRIKING OR BUMPING	0	0	0	0		0	0		0	0		0	0
OTHER	0	1	0	1		0	1		0	0		0	0
YEAR TO DATE TOTALS	1	19	2	11		1	13		6	11		1	16
COMBINED YEAR TO DATE TOTALS	2	20		13		14		17		7		17	
END OF YEAR TOTAL	4	42 26			27			35					

Metal and Nonmetal National Mine Rescue Contest

The 2006 Metal and Nonmetal National Mine Rescue Contest was held on July 11-13 in Reno, NV. This biennial contest serves as a training tool to improve the skills required to respond to a mine emergency.

A total of 33 teams from 12 states were entered in this year's contest, representing 26 mines, plus the US Department of Energy's Waste Isolation Pilot Plant (WIPP). **MSHA** personnel from all six MNM Districts, as well as MSHA and MNM Headquarters, Technical Support, and Educational Field Services staff, and volunteers from various state mine safety agencies, conducted the contest at the cavernous Reno **Sparks Convention and Visitors** Center.



Rescue team erecting a stopping at the MNM National Mine Rescue Contest

The contest consisted of four separate events, including the mine rescue field competition, as well as first aid, apparatus benchman, and multi-gas meter benchman competitions.

The winner of the mine rescue field competition was the FMC the **FMC** White team from Westvaco trona mine near Green River, WY. Runner up was the FMC Red team from the same mine. The team from the Morton Salt Weeks Island mine near New Iberia, LA finished in third place.

The winner of the first aid contest was the Barrick Gold Team from the Barrick Goldstrike Mine near Carlin, NV.

The apparatus benchman competition comprised three separate contests; one for each of the three types of mine rescue breathing apparatus used in US underground mines, the Drager BG-4, the Drager BG-174, and the BioPak.

The winner of the Drager BG-4 contest was Curtus Sanders from the Silver Team of the WIPP operations near Carlsbad, NM. The winner of the BG-174 contest was Ricky Martin from the Maroon Team of the Doe

Run Company, Viburnum, MO. The winner of the BioPak contest was Tom Senecal from the Gold Team of Newmont Mining Corporation's Carlin Mine near Carlin, NV.

The winner of the multi-gas meter benchman contest was Rick Owens from the FMC Westvaco Mine near Green River, WY.

Congratulations are extended to all of the winners, as well as all of the other teams that participated in this year's contest.

Lock-Out / Tag-Out - - A True Success Story!

Lock-Out/Tag-Out Saves Lives by George Kent

On January 16, 2006, a cement plant employee was accidentally locked inside duct work to an air separator in a finish mill. The mill was on a scheduled shutdown and a build up of material was to be removed from inside the duct work, approximately 26 feet from the access door. The employee entered the separator and crawled to his work location. His compressed air hose and electrical cords routed were through the damper, opening in relatively close to his work, prior to entry.

The employee attempted to exit the air separator for a rest break, only to discover the access door had been closed and locked from the outside by someone unaware of his work on the inside.

The trapped employee yelled and pounded on the duct work, trying to get someone's attention. He then crawled back to the area where he had working and began been shining his work light through the openings his equipment passed through. approximately two hours, a passing employee noticed the flashing light and released him.

Visibly shaken and fearing the separator could have been started, the miner remembered that he had locked and tagged out the equipment prior to entering. He performed the lock-out/tag-out procedures

exactly as instructed in his training classes.

This incident illustrates the importance of lock-out and tagout. Hanging <u>your own</u> lock and tag ensures <u>your safety</u>. You will quickly realize the benefit of using a lock-out/tagout system if you are ever

exposed to a "close call" or "near miss" situation. As a result of this incident, the company has implemented an additional safety measure. Chains and hooks were welded to the access door so employees could lock and tag the doors in an open and secured position when entry was required.



Entry door into air separator duct in finish mill



Air separator duct in finish mill

New Final Rule on DPM Exposures of Underground Metal and Nonmetal Miners

On May 18, 2006, MSHA issued a new Final Rule on diesel particulate matter (DPM) exposure of underground metal and nonmetal miners.

Regulations relating to DPM exposure of underground MNM miners were first issued by **MSHA** in January 2001. however, this original DPM rule was quickly challenged in court by several mining companies and mining industry organ-As a result of onizations. going settlement negotiations with these parties, as well as with the United Steelworkers of America (USWA) union, which intervened in the litigation, provisions of various the original rule have been changed through subsequent rulemakings.

The May 18, 2006 Final Rule establishes a two-year phasedin final DPM limit, changes the requirements for operators that wish to apply for a special extension of the final DPM limit. and establishes requirements for medical evaluations of miners who are required to wear respiratory to protection due exposure and the medical

transfer of such miners who are found to be medically unable to wear respiratory protection.

The provisions relating to the final DPM limit and special extensions to the final limit became effective on May 20, The provisions relating medical evaluation to medical transfer required to respiratory use protection due to DPM exposure are due to become effective on August 16, 2006.

These new provisions could significantly the affect compliance status many mines. Underground mine operators are therefore urged to become familiarized with the details of these new rule provisions and take appropriate steps to obtain and maintain compliance. A draft compliance both quide covering the previously existing and the new provisions of the DPM rule has been posted on MSHA's internet web site. Miners and mine operators can contact the MSHA North Central District Office with questions on this new Final Rule.

Training Resources Applied to Mining (TRAM) Conference October 10-12, 2006

Plan now to attend the annual Training Resources Applied to (TRAM) Conference Mining which will be held on October 10-12, 2006 at the National Health Mine and Safety Academy, Beaver, West Virginia. This tuition-free seminar, which is open to all public and private sector mine health, safety, and training personnel, provides opportunities for health and safety trainers from all parts of the mining community to improve their training programs with new ideas, new instructional methods, and new training materials.

The 2006 TRAM Conference will feature 60 to 70 workshops covering a wide variety of mine safety and health topics. You select the workshops you wish to attend. The small group format encourages interaction between you and the workshop participants, attendees, and leaders, and provides excellent

opportunities for networking with your fellow mine safety and health professionals.

TRAM 2006 also features exhibits and а training materials competition. The exhibits highlight training products and materials developed MSHA. State bv recipients, grants and the mining industry. Although a few items may be for sale, most items are free to seminar participants.

For further information contact the following:

Presentations:

Melody Bragg: (304) 256- 3556 bragg.melody@dol.gov

Exhibits:

Debbie Worrells (304) 256-3201 worrells.deborah@dol.gov

<u>Safety Materials Competition</u>: Jimmy Shumate (304) 256-3353 shumate.jimmy@dol.gov